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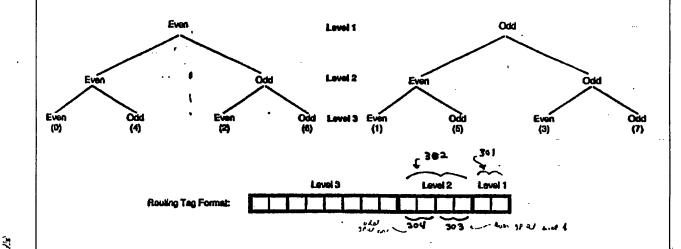
## WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 5: WO 93/06675 (11) International Publication Number: A1 H04L 12/56, H04J 3/24 1 April 1993 (01.04.93) (43) International Publication Date: (81) Designated States: CA, JP, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE). PCT/US92/07978 (21) International Application Number: (22) International Filing Date: 25 September 1992 (25.09.92) **Published** With international search report. (30) Priority data: 26 September 1991 (26.09.91) US 765,776 (71) Applicant: COMMUNICATIONS SATELLITE COR-PORATION [US/US]; 950 L'Enfant Plaza, S.W., Washington, DC 20024 (US). (72) Inventor: SHYY, Dong-Jye; 19729 Crystal Rock Dr., Apt. 14, Germantown, MD 20874 (US). (74) Agent: FOURNIER, Kevin, J., Sughrue, Mion, Zinn, Macpeak & Seas, 2100 Pennsylvania Ave., N.W., Washington, DC 20037-3202 (US).

(54) Title: NONBLOCKING MULTICAST FAST PACKET/CIRCUIT SWITCHING NETWORKS



## (57) Abstract

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A self-routing nonblocking multicast switching network (Fig. 4, Fig. 5, Fig. 6, Fig. 7, or Fig. 8) routes input messages to destined addresses by examining a routing tag (Fig. 3b, Fig. 3c and Fig. 3d) combined in each message. The routing tag (Fig. 3b, Fig. 3c and Fig. 3d) has a plurality of sections (301, 302, 303, 304) each section corresponding to a level of a tree hierarchy (Fig. 3a) related to the outputs of the switching network. The network sorts the messages by examining only one section of each routing tag and routes and sorted messages to the destined addresses based on the bits contained in the routing tags.